

## P2 Alternative

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### General

What is the difference between listing a preliminary compliance decision as “P2 alternative” versus “P2 alternative with modification” in Table C of the P2 Audit?

Listing “P2 alternative” means that the facility will follow the P2 practices listed in Table 8 of the final rule for that wastewater source without utilizing any of the listed (or nonlisted) modifications. For example, if a facility generates an interior equipment cleaning rinsate, they will store and reuse the rinsate in their PFPR operations.

Listing “P2 alternative with modification” means that the facility is claiming a modification (listed or nonlisted) to a Table 8 P2 practice, meaning they have a good justification to not conduct that specific practice. For example, if a facility generates an interior equipment cleaning rinsate, but has documented that biological growth occurs when they store the rinsate for that product, they could claim a listed modification to release them from the requirement to reuse that rinsate in their PFPR operations. However, the facility would still need to treat this rinsate prior to discharge to the receiving stream or POTW.

If an indirect discharger disposes of interior wastewaters, leak/spill water, and floor wash water off site, can other PFPR process wastewaters be discharged to the POTW without implementing P2 practices?

No. The reasoning behind allowing a discharge under the P2 alternative is to encourage greater use of the P2 practices. Therefore, certain general practices, such as water conservation, would still need to be implemented even though other P2 practices, such as the recycle of interior wastewater, would not be applicable if interior wastewaters were disposed of off site. However, if the facility was implementing P2 practices and disposing interior wastewaters, leak/spill water, and floor wash water off site, the facility could discharge the remaining PFPR process wastewater sources to a POTW without prior treatment.

### P2 Practices/Best Management Practices

How does EPA define triple rinsing of equipment?

EPA defines triple rinsing in 40 CFR 165.1 (Regulations for the Acceptance of Certain Pesticides and Recommended Procedures for the Disposal and Storage of Pesticides and Pesticides Containers), as follows:

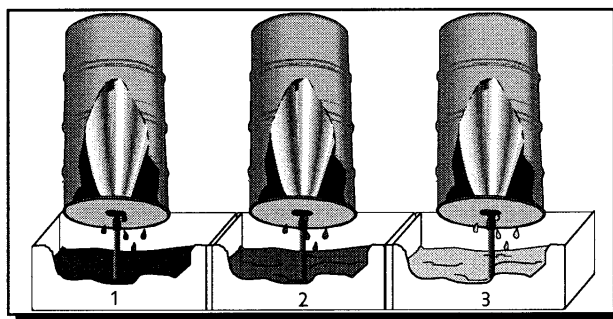
“Triple rinse means the flushing of containers three times, each time using a volume of the normal diluent equal to approximately ten percent of the container’s capacity, and adding the rinse liquid to the spray mixture or disposing of it by a method prescribed for disposing of the pesticide.”

The Container regulation also allows for an equivalent pressure rinse. Note that the final PFPR rule does not require triple

rinsing as part of the P2 alternative, but when PFPR-related equipment is triple rinsed/pressure rinsed, the wastewater generated would be covered by the P2 alternative if it is generated from in-scope PFPR production and wastewater sources.

**Why is the drum rinsing station referred to as countercurrent rinsing?**

The drum rinsing station is not *true* countercurrent rinsing; however, it is operated in a countercurrent fashion, where the drums are moved from station 1 to 2 to 3 and the water is moved from Station 3 to 2 to 1, where station 1 contains the most concentrated rinse and station 3 contains the least concentrated rinse. When station 1 becomes too contaminated to effectively rinse drums, fresh water is used to replace it, and station 1 becomes station 3, station 3 becomes station 2, and station 2 becomes station 1.



**Why didn't EPA include the operation of a countercurrent drum rinsing station that uses solvent in the list of P2 practices?**

Drum rinsing stations allow for the recycle (as opposed to reuse) of drum rinsates (note: discharge from drum rinsing stations must be treated prior to discharge). EPA did not specifically list the use of countercurrent drum rinsing stations for solvent-containing drums because it is not common in the industry; however, a facility could seek an unlisted modification for this practice.

**Instead of using drip pans, can a facility operate a general sump in their compounding area?**

A facility can operate a general sump in the compounding area as part of the P2 alternative if they can demonstrate that they are reusing the water collected in the sump. The intent of this P2 practice is to reuse the collected drips and spills, or, at a minimum, to prevent concentrated leaks and spills from increasing the pollutant loading in the floor wash water. The facility would need to request a nonlisted modification and receive approval for that modification from the permitting/control authority. If the water is not being reused, the facility would need to provide justification as to why drip pans could not be used.

**Does a facility have to use drip pans, or could they use some other method of collecting drips and spills (e.g., hard pipe, welded flanges, etc.)?**

The facility could implement another practice, although they would need to request a nonlisted modification. In addition, the facility must show that the alternate method would adequately prevent leaks and drips from occurring or would allow reuse of the material (see above).

**Do facilities that operate wet air pollution control scrubbers discharge that wastewater?**

Yes, facilities that operate these devices typically discharge a blowdown stream from the scrubber periodically. Some facilities may also operate these devices with a continuous discharge. Often, these facilities treat the scrubber water prior to discharge to the POTW or receiving stream. Note: Under the P2 alternative, facilities must employ some recirculation of water used in air pollution control scrubbers.

**Can you store and reuse material for greater than 90 or 180 days?**

If you are storing hazardous or characteristic material (e.g., rinsate) on site *for reuse*, it is not considered *waste* and therefore is not covered by the 90- and 180-day storage limitation. However, the RCRA regulations require that materials being stored for reuse not be accumulated speculatively. Material not considered speculatively accumulated includes material that is shown to be recyclable, to have a feasible means of being recycled, and, that during the calendar year, the amount of material recycled equals at least 75% by weight or volume of the amount of that material accumulated at the beginning of the period. This discussion is included on page 57529 of the preamble to the final rule in Appendix A.

**Many inerts at a facility are also used in nonregistered products. How is it determined which inert drum rinsates are covered by the PFPR regulations?**

It is the intent of the rule to cover wastewater associated with pesticide production; therefore, cleaning rinsates of drums containing inert materials used in PFPR production would be covered under the PFPR rule. Many facilities are able to separate pesticide and nonpesticide operations. Therefore, if the facility can specify that only material from certain drums are used in PFPR production, then only the rinsate from those drums is covered under the PFPR rule. If the facility cannot make this distinction, then rinsate from all drums containing that material is covered by the rule. Note: Not all drums will need to be rinsed. Many inert containing drums hold chemicals that do not trigger the rinsing requirements under FIFRA or RCRA.

A facility may be able to request a nonlisted modification if they are unable to reuse all inert drum rinsate; however, they must show good justification as to why they cannot reuse it, as well as demonstrating reuse of some of the rinsate in their PFPR process.

**If a facility uses equipment to produce both solvent- and water-based products, at what point after solvent rinsing is the final water rinse considered “clean” enough (i.e., no longer containing detectable quantities of pesticide active ingredient)?**

**Does a facility have to reuse rinsates from the cleaning of refillable containers? These containers may contain impurities, which precludes the reuse of the rinsate in the product formulation because of quality control concerns.**

**If the shipping containers/drums are metal, they may not need to be rinsed since refurbishers have a flame to clean drums.**

**A facility performs the first two rinses of their pesticide active ingredient raw material drums with a solvent compatible with the formulation. The third rinse uses a water/detergent blend to remove the solvent. This water/detergent blend cannot be used in the formulation or in any formulation at the facility. Is the water/detergent rinse eligible for treatment and discharge under the P2 alternative, or must it meet zero discharge (through off-site disposal)?**

**What does a facility do with solvent used to rinse tanks, since they will not be able to reuse the solvent forever?**

Practice 9 (listed in Table 8) states that facilities must dedicate PFPR production equipment to water-based versus solvent-based products. This practice is intended to eliminate the generation of solvent-contaminated wastewater, which are typically unable to be reused in PFPR operations. By dedicating production equipment, facilities may reuse solvent rinses and water rinses into solvent-based and water-based formulations, respectively.

Facilities may also discuss incorporating a listed modification (i.e., operation of a solvent recovery system) or nonlisted modification to this practice with their control/permitting authority.

Under the P2 alternative (for Subcategory C facilities), reusing rinsates from the cleaning of refillable containers would be required unless the facility requested a modification. Although the stated reason for not reusing the rinsate is not a listed modification, a facility could request a nonlisted modification if they are also able to supply sufficient documentation of the quality control issue.

The P2 alternative is not available to refilling establishments (Subcategory E facilities); therefore, facilities are not required to reuse rinsates. However, these facilities must achieve zero discharge of all PFPR process wastewaters.

Drums may be metal, fiber, or plastic. The PFPR rule does not require rinsing of drums; however, if drums are rinsed, the drum rinsate is a covered wastewater source and is subject to the P2 alternative.

If the facility must use the water/detergent blend for the final rinse because a drum refurbisher requires such cleaning before accepting the drums, the facility can meet the P2 alternative by using the listed modification for Practice 8 [“REFURB”]. However, if the facility is not required by a drum refurbisher/recycler to rinse the drums in this manner, the facility must either meet zero discharge for the final rinse or request a nonlisted modification from their control authority/permitter to allow treatment and discharge under the P2 alternative. The facility could also use a drum rinsing station for the water/detergent rinsing step, which would allow for recycle of the water/detergent rinsate to clean a large number of drums.

For solvent rinses associated with drum rinsing or interior equipment cleaning rinsing operations, it is expected that, under the P2 alternative, a facility will reuse the solvent into the formulated product (or, at a minimum, they will segregate their

**Has EPA looked at any of the “clean laboratory practices”? Are they required for this rule and, if so, how does that affect compliance with this rule?**

solvent rinsates from their water rinsates). If the facility is not able to completely reuse their solvent rinses in this manner, they must dispose of the solvent in accordance with appropriate disposal regulations; however, the PFPR rule only covers *wastewater* discharges (not solid or hazardous waste disposal operations).

The words “clean,” “ultra-clean,” “clean techniques,” “clean laboratory practices,” and other words and phrases have been used to describe additional steps taken to preclude contamination during sampling and analysis of trace metals. These techniques are not required for effluent monitoring. However, EPA has been made aware that for some metals (e.g., zinc) it may be prudent to apply some of these clean techniques in effluent monitoring to assure that results are reliable and are not the result of contamination.

This rule does not specifically require analytical testing, but testing may be necessary to show that the facility’s treatment system is “well operated and maintained,” as discussed in 40 CFR 455.41(c)(5) [page 57550 of the preamble to the final rule, located in Appendix A of this guidance manual].

**The PFPR rule states that disposing of wastewater at a RCRA incinerator complies with “zero discharge.” In addition, incinerator scrubber water is not considered a process wastewater. Therefore, can a facility receive BPJ allowances for incinerator scrubber water pollutant loads without implementing P2 practices?**

Yes, but such an allowance must be based on the PFPR contribution to the facility’s production.

**If equipment used for dry production is cleaned first by running a dry carrier through to pick up residual product, followed by a water rinse, is the water rinse considered “the final rinse of a triple rinse” and therefore eligible for a waiver from pretreatment from the control authority?**

In general, that water rinse could be equated to the final rinse of a triple rinse; however, the control/permitting authority will use BPJ to determine whether a waiver is appropriate to be granted.

Does inventory management only concern the management of rinsates? May it also include liquid and/or solid raw materials and intermediates in order to reduce waste generation due to shelf-life limitations?

Inventory management systems can be used for the management of raw materials, intermediates, finished products, rinsates, etc. that are associated with PFPR operations. Inventory management is not a P2 practice required by the PFPR regulation, but generally is a good practice to incorporate.

## Listed Modifications to P2 Practices

If your formulation only requires the amount of water generated from the rinsing of pesticide active ingredient drums, can you discharge the rinsate from the inert drums?

Assuming that the facility has already implemented flow reduction measures when rinsing their pesticide active ingredient and inert drums, the facility would be able to use the listed inert modification. Note: many inert ingredients do not trigger FIFRA or RCRA drum rinsing requirements; therefore, inert-containing drums may not need to be rinsed prior to recycle or disposal.

Is a one-time test per product acceptable to justify the "BIOGROWTH" modification?

Yes, over the time period of the permit (usually three years), unless the product formulation or method of production is altered in a way that could affect the quality of the wastewater. If a facility is going to use laboratory testing to demonstrate biological growth (or other product deterioration), it should be performed with a sample that is representative of the formulation, as well as the typical storage period.

A facility has very long production runs (1 to 2 years) and cannot predict when product changeover will occur. When they do change over production, they generate a non-reusable rinsate. Is this facility eligible for the "DROP" modification?

After demonstrating the use of water conservation practices (as specified in P2 practice #1 in Table 8 of the PFPR rule), a facility could use historical production data to support the "DROP" modification. This modification allows the facility to discharge interior rinsates under the P2 alternative when the facility is dropping registration or production of the formulation and there is no compatible formulation for reuse of the rinsates or the facility can provide a reasonable explanation of why it does not anticipate formulation of the same or compatible formulation within the next 12 months.

## Nonlisted Modifications

Can economics be taken into account when asking for waivers on interior rinsates (i.e., for a nonlisted modification)?

EPA has not specified economics as a modification to Table 8; however, local authorities have the opportunity to use best professional judgement in considering nonlisted modifications. Note, though, that POTWs and control authorities may not be able to be flexible in approving nonlisted modifications for PFPR facilities if they are tied to what they are allowed to discharge to their receiving streams.

EPA did evaluate the cost of PFPR facilities complying with the P2 alternative and found that the P2 alternative (with listed

**Is there a listed modification for toll formulators/packagegers so that they do not have to dedicate solvent- vs. water-based production equipment, since their production changes so often and they cannot control what products are made when?**

Practice 7 in Table 8 of the rule allows for disposal of rinse water from cleaning shipping containers if a staged drum rinsing system is used. Is this system an acceptable alternative for solvent-based products as well (i.e., Practice 8)? In both practices, product quality objectives generally dictate disposal of drum rinsates. The use of staged drum rinsing will minimize the volume of waste generated. With increasingly stringent FIFRA regulations on cross-contamination, we are reluctant to reuse rinsate from containers that have been out of our direct control even though the containers are in dedicated service.

## **P2 Audit**

**Does a facility need to track raw material bags, which are emptied and disposed of, during the P2 audit?**

modifications) is economically achievable for the industry. In addition, EPA built in other types of waivers to treatment. EPA will allow the control authority to waive the pretreatment requirements for floor wash and the final interior rinse of a triple rinse that has been demonstrated to be non-reusable when the facility demonstrates that the level of pesticide active ingredients and priority pollutants in these wastewaters are present in concentrations too low to be effectively pretreated at the facility. In addition, these pollutants must neither pass through nor interfere with the operation of the POTW (see 40 CFR 403.5). The control authority should take into account whether the facility has used water conservation practices when generating such a non-reusable wastewater.

No. However, these toll formulators could install a solvent recovery system (as some toll formulators have already done) and take the listed modification ("RECOVERY"). In addition, the facility may be able to justify an unlisted modification; however, the fact that the facility is a toll formulator is not justification enough.

Drum rinsing stations allow for the recycle (as opposed to reuse) of drum rinsates (note: discharge from drum rinsing stations must be treated prior to discharge). EPA did not specifically list the use of countercurrent drum rinsing stations for solvent-containing drums because it is not common in the industry; however, a facility could seek an unlisted modification for this practice.

No, the P2 audit that is suggested by EPA for compliance with the PFPR rule focuses on water use and wastewater sources. Therefore, it is not intended to track nonwater waste sources such as empty raw material bags. However, it may be useful for facilities to evaluate all waste sources (including solid

wastes and air emissions) associated with their processes to identify potential P2 opportunities that limit cross-media transfers.

## P2 Allowable Discharge

**What is the *de minimis* exemption allowed by this rule?**

The rule does not have any *de minimis* exemptions, but does have a P2 allowable discharge, which is the discharge of any remaining PFPR wastewaters after implementation of P2 practices and any necessary treatment. The amount is expected to be small; however, it is not referred to as a *de minimis* exemption because it is not quantifiable.

**Is there a *de minimis* concentration of pesticide active ingredient allowed in wastewater (i.e., if the concentration is below the *de minimis* value, is it exempted from regulation)?**

No, there is no *de minimis* concentration of pesticide active ingredient exempted from the rule. However, certain products or pesticide active ingredients are exempted, and certain wastewaters are exempted based on their source. For Subcategory C, please refer to Section 455.40(c), (d), (e), and (f) for a discussion of these exemptions. For Subcategory E, please refer to Section 455.60(b) and (c). The final rule may be found in Appendix A of this guidance manual.

**Is there a volume or upper limit to the P2 allowable discharge?**

No, a facility may discharge whatever remains after implementation of the specified P2 practices (and treatment when necessary). Note: the P2 practices include water conservation practices, which will reduce the volumes of wastewater to be treated and discharged.

**How does a facility document “insignificant” levels of pesticide active ingredient and obtain a waiver for floor wash and outside packaging equipment wipe-down rinsate?**

A control authority may grant a waiver that removes the requirement to pretreat certain wastewaters prior to discharge. This waiver may be granted to indirect dischargers for two types of wastewaters: floor wash water or the final rinse of a non-reusable triple rinse (note that under the P2 alternative, exterior equipment cleaning rinsate is not required to be pretreated). The waiver may be granted only when the levels of pesticide active ingredients and priority pollutants are too low to be effectively pretreated and have been shown to neither pass through nor interfere with the operation of the POTW (see footnote 9 on page 57529 of the final rule, located in Appendix A of this guidance manual). The granting of such a waiver is through the best professional judgement of the control authority/POTW; therefore, the facility must work with the control authority/POTW to determine the documentation necessary to demonstrate these items.